



EXPLORING THE STRATEGIC BENEFITS OF BUSINESS INCUBATION: AN INTERNATIONAL PERSPECTIVE

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Abstract: This paper critically reviews, identifies and analyzes the literature related to the strategic benefits of Business Incubators (BI), in the context of using BI as an economic development strategy. We examine the importance and the benefits of BI to: 1) economic development, 2) technology commercialization, 3) entrepreneurship, 4) job creation, and 5) the pace of innovation. The findings indicate that the potential applications of Business Incubators include promoting the establishment and long term survival of new ventures that will likely lead to a significant increase in job creation as well as promoting a climate of innovation and entrepreneurial spirit. This will tend to increase gross private domestic private investment and will also attract highly skilled workers. These actions promote the stabilization and eventual expansion of the business community while facilitating the growth of social and intellectual capital. The findings of this study will be significant to both scholars and practitioners and will provide a deep understanding of the strategic benefits of Business incubators.

Keywords: *Business Incubators, Economic Development, Technology, Commercialisation, Entrepreneurship, Job Creation, Innovation.*

INTRODUCTION

Business and technology incubators became popular in the United States in the 1980s and have spread throughout the world as a means of supporting the

development and growth of start-up and fledgling companies as well as facilitating the commercialization of scientific and technological innovations. Sometimes known by other names such as research parks or innovation centres

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(Lourenco, 2004), they operate by “providing entrepreneurs with an array of targeted resources and services” (NBIA, 2009) such as low-cost space, shared equipment and services, and a range of administrative, consulting, and networking services. Their main objective is to produce “successful firms that will leave the program financially viable and freestanding” (NBIA, 2009). Incubators take a range of different forms, with one of the main distinctions being between those operated as for-profit businesses and those which are non-profit ventures generally established by governments, universities or other non-profit organizations.

Business incubators, especially those operated by local or national governments, are frequently used as a tool to promote the economic development of a community, region or country. To this end, they may be established as part of a wider economic development program or strategy. In the United States, in particular, the widespread use of technology-based business incubators to support local and state-level economic development strategies has been justified by the strong theoretical arguments and growing empirical evidence

that innovation promotes economic growth (Wagner, 2006). A National Business Incubation Association (NBIA, 2007) publication observes that “the most common goals of incubation programs are creating jobs in a community, enhancing a community’s entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies” (NBIA, 2007). Whether or not economic development is one of their main objectives, all types of successful incubator programs are likely to help contribute to this indirectly by facilitating business growth and technological innovation.

The purpose of this paper is to identify the benefits of the business incubators in an international context. These identifications are based on examinations of academic literature and published case studies.

The structure of the paper is as follows: Section 2 provides a thorough literature review of business incubators. Section 3 narrates the research methodology that has been used, which is comprised mainly of desk-research. Section 4 includes discussion and conclusion.

RELATED LITERATURE REVIEW OF BUSINESS INCUBATION

Traditionally, business and technology incubators have been seen as potential economic development tools mainly in terms of their role in promoting the establishment and survival of new ventures. This will serve to increase intellectual capital formation among the members, which in turn is associated with enhanced innovation, employment growth as well as political and social stability (e.g. Hoffman, Parejo, Bessant and Perren, 1998; Thurik and Wennekers, 2004). In particular, incubators have been regarded as a low cost method of job creation, at least when compared to other economic development tools (Lourenco, 2004). They have also been attributed with promoting a climate of innovation and entrepreneurial spirit, increasing private investment and drawing highly skilled workers into a community or region (e.g. Molnar et al., 1997; DiGiovanna and Lewis, 1998). In addition to supporting new businesses, they are sometimes used for the purpose of business stabilization or business expansion, which in turn helps to strengthen the economies in which the firms are located.

The actual impact of business incubators on economic development has generally been measured in terms of quantitative measures such as number of jobs created, firm graduation rates and tax receipts (Lourenco, 2004). Recently, however, there has been a shift in focus in the business incubation literature onto the potential role of incubators; although empirical evidence of this is still limited and the actual body of research evidence supporting this is relatively small. Social capital has been defined as “social networks, reciprocities that arise from participation in these networks, and the value that participating members derive from these reciprocities” (Lourenco, 2004). Compared with traditional ways of forming networks and alliances which rely on personal contacts formed by the members of individual firms, the member firms of business incubators obtain preferential access to an established business network, and can share the workload involved in expanding and maintaining this network, freeing up resources for other business activities.

There are significant gaps in knowledge regarding the role of business and technology incubators in promoting economic

development in developing countries, such as those of the GCC states, and very little has been done to synthesize the available findings of research from different countries and regions regarding the impact of business incubation on economic development (Al-Mubarak, Al-Karaghoul, and Busler, 2010). Overall, as Hackett & Dilts (2004) observe, "the area of incubator-incubation impact research is surprisingly understudied".

RESEARCH METHODOLOGY

The research methodology that has been used in this research study is comprised of desk-research.

Desk-Research: Business Incubation and Economic Development

From the current literature, it is evident (see section 2 above) that the number of business incubators is growing rapidly. In 1980, there were 200 incubators while today the number has grown to approximately 7,000 (NBIA 2010). The Business incubators are becoming more and more popular among entrepreneurs and those who are aware of the wide array of benefits that these organisations can offer regarding the resources

that fledgling companies need in order to succeed in the long-term.

Business incubators contribute to the economy and also play an active role in the local, regional and national economic development. Business incubators, however, can not transform an economy and should be integrated into a broader economic policy reform, which includes infrastructure investment and financing. When approaching a new incubator project the development team should fully understand and formulate the economic purpose or mission of an incubator to achieve the required return on the resources invested in the program. Business incubators can generally be used for one or more of the following three economic development purposes: 1) New business formation is the most common economic development focus of business incubators around the world, 2) Business stabilisation to provide business support services and guidance to help to stabilise the business and reduce the chance of failure, and 3) Business expansion by helping business owners improve operational efficiency, while identifying and accessing new markets or expanding production capabilities (Al-Mubarak, 2008;

Al-Mubarak and Busler 2009; Al-Mubarak and Busler, 2010A; NBIA, 2007; NBIA, 2010).

Recently, however, there has been a shift in focus in the literature of business incubation to the potential role that incubation contributes to the economic development, due to facilitating and creating social and intellectual capital, although empirical evidence of this is still limited. Social capital has been defined as “social networks”, where reciprocities arise from participation in these networks and the value that participated members derive from these reciprocities (Lourenco, 2004; Clark and Minor, 2000; CPAC, 1998).

Technology Transfer

During the FY 2009, the National Science Foundation (NSF, 2010) provided \$2.4 billion for supporting successful and innovative research in the field of technology transfer. There is a direct relationship between the volume of research performed and the flow of innovation. NSI is achieving increased economic volume outcomes demonstrated by an increase in patenting, licensing and royalties. The study of Association of University Technology Managers

(1999) estimated \$33 billion of economic activity and 280,000 jobs are attributable to academic licensing of technology. However, the technology transfer function in universities, with sensitivity to regional economic development, will also commercialize faculty inventions via licenses with state based companies' involvement in entrepreneurial and economic development. Innovation strategy is a critical activity in United States. To date, the total U.S. support for innovation strategy exceeds \$100 billion.

Indications are that the 21st century will be built by technologies and innovation. Innovation will create new jobs and catalyze broadly shared economic growth. The strategy for American innovation consists of three parts. First, invest in the building blocks of American innovation to ensure that these innovations transfer into gains in economic development. Second, promote competitive markets that tend to increase long-term productivity. Finally encourage economic development that is consistent with national priorities (White House, 2010).

Recently Joseph & Eshun (2009) demonstrated that the commercialization of new products, new

processes, and new business models, require firms to pursue creativity, innovation, and entrepreneurship as well as embrace and adopt business incubation as a strategy for success. Furthermore, they argue, that in the new economy, creativity, innovation and entrepreneurship should not be the exclusive routine or practice of only small firms but should also be a part of large corporation's strategy if they are to survive and prosper in the new economy.

Innovation, Entrepreneurship, Job Creation based on Incubators

Innovation is the process of making change, difference and novelty in the products, and services, while adding value to create economic and social benefit (EC, 2010). The OECD (2010) defines innovation as the implementation of a new or significantly improved product, service, process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. The importance of innovation within the economic cycles, considers entrepreneurship with a specific emphasis on entrepreneurial innovation. As such, innovation

deals with: 1) new products, 2) new production methods, 3) new markets, and 4) new forms of organization. Therefore, while the basic concepts of entrepreneurship, innovation and incubation, along with the associated terminology, must be commonly accepted and shared, when putting into practice actions towards the creation of new Innovation Based Incubators (EC, 2010).

Innovation is the driver of our future growth (White House, 2010; EURP, 2010; EBN, 2010; EC, 2010 and Joseph and Eshun, 2009). This requires improving the quality of our education, strengthening our research performance, promoting innovation and knowledge transfer throughout the Union, making full use of information and communication technologies, and ensuring that innovative ideas can be turned into new products and services that create growth, quality jobs and help address global societal challenges. But, to succeed, this must be combined with entrepreneurship, finance, and a focus on user needs and market opportunities (EC, 2010).

Innovation-based incubators are local economic development tools (EURP, 2010; Al-Mubarak

and Busler, 2009; Joseph and Eshun, 2009; Al-Mubarak and Busler, 2010A; Al-Mubarak and Busler, 2010B), which foster the conditions for creation and growth of novel business activities and contribute actively to the development of the regions where they operate. In addition, innovation based incubators support innovative business projects which could be either technologically-oriented or nontechnologically oriented. Technology therefore is not the only unit on which to measure the degree of innovation of a business idea (EC, 2010).

Incubators provide new high-tech venture creation, technological entrepreneurship, commercialization, and transfer of technology (Mian, 1994 and 1997; Phillips, 2002; Mc Adam and Mc Adam, 2008; Al-Mubarak, 2008).

According to (Monkman, 2010; NBIA, 2010) incubators have been promoting innovation, and creating jobs by providing emerging companies with business support services. The most common goals of incubation programs are creating jobs in a community, enhancing a community's entrepreneurial climate, retaining businesses in a community, building or accelerating

growth in a local industry, and diversifying local economies.

Today, according to various reports from Europe (EBN, 2009; OCDE, 2010) the innovation R&D spending in Europe is below 2%, compared to 2.6% in the US and 3.4% in Japan, mainly as a result of lower levels of private investment. The aim is to re-focus R&D and innovation policy on the challenges facing our society. The essential benefits of economic growth should reach the public because the direct relationship between innovation, entrepreneurship and job creation is based on incubators (EBN, 2009; OCDE, 2010).

DISCUSSION AND CONCLUSION

In this study, aspirations, impacts, benefits and issues associated with the adoption of incubators as stimulus for economic development are discussed. Business incubators impact wide range of economic activities such as, building confidence among the finance community, supporting start-ups, promoting cultural change and helping to foster a culture of entrepreneurship as a catalyst for the development of wider business support structures. Business incubation could be an effective tool

for economic development at significantly higher cost than originally anticipated.

Since incubators come in all shapes, levels and sizes and highly influenced by surrounding (internal and external) factors there is no example of a typical incubator with similar elements. It is worth mentioning that the incubators' experience in USA is well established, i.e. often located at the heart of an environment that encourages entrepreneurship in which public and private entities often work together.

Finally, this study has clearly stated that the real added value to business incubation is in supporting services and business assistance, e.g. the quality of technology support, range of business assistance, training of interveners, and access to capital. This is evident in the United States of America.

The following general conclusions can be drawn from the previous overview of the findings of key studies into the impact of business and technology incubators, conducted in a range of different countries.

1. First, business and technological incubators have considerable

potential for contributing to economic development, as demonstrated by evidence of job creation, enhanced firm survival rates and increased technological innovation.

2. Apart from the direct impact of business incubators, contextual factors may also play an important role. From the studies conducted in the USA it can be argued that business incubation may only have a significant impact on economic development if it occurs in the context of broader economic reforms including investments in infrastructure, led by governments.
3. Some of the aspects and activities of business and technology incubators can hinder rather than promote economic development. For example, promoting an approach which is too academic, or creating industrial or geographical clusters of firms rather than the diversification which may be needed for healthy economic growth, could slow development.
4. The role of business and technology incubators in generating social and intellectual capital and the impact of these forms of capital on economic

development, is difficult to measure, largely due to the difficulties of even defining these forms of capital; moreover the available research evidence in this area is very limited.

Drawing general conclusions about the overall impact of business and technological incubators on economic development is extremely difficult, and may even be inappropriate, due to the wide variety of different forms of incubators which exist. The impact of incubators or incubator programs must be identified and measured in order to provide accountability, particularly if public funds are involved. The availability and use of standardized tools of this nature is likely, in the longer term, to generate a body of more robust evidence regarding the ways in which business and technology incubators influence economic development and the actual impact of particular incubator programs on local or national economies.

BIOGRAPHY

Dr. Hanadi Mubarak Al-Mubarak is assistant professor in Kuwait University. she teaches undergraduate and graduate courses in project management and civil engineering. Further more, she

teaches undergraduate courses in business schools such as management .she has been published in different academic journals,book and has presented his research in many countries in addition, .She prepares feasibility studies of many projects and formulates the aspects of research and development proposals for improving costs, monitoring projects and assuring quality developments in Kuwait University. Dr. Al-Mubarak worked as financial analyst and project engineer in MPW Turner International, Kuwait. Finally, She earned intensive training program in gleeds international U.K as jounierenginner. sheearned her doctorate from Washington International University.

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